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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/748,289	12/31/2003	William L. Bendik	PK-US035176	8411

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EXAMINER	
WONG, EDNA	

ART UNIT	PAPER NUMBER
1753	

DATE MAILED: 10/25/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/748,289	BENDIK ET AL.	
	Examiner	Art Unit	
	Edna Wong	1753	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☐ Responsive to communication(s) filed on _____.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-20* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-20* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☒ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

Specification

The disclosure is objected to because of the following informalities:

page 16, lines 18-19, reference characters "36" and "38" (from page 16, line 11) have both been used to designate the inner connecting surface.

page 18, line 21, the words -- (not shown) -- should be inserted after the number "70".

page 18, line 21, the words -- (not shown) -- should be inserted after the number "72".

page 18, line 22, the words -- (not shown) -- should be inserted after the number "74".

page 18, line 26, the words -- (not shown) -- should be inserted after the number "76".

page 18, line 26, the words -- (not shown) -- should be inserted after the number "78".

Appropriate correction is required.

The lengthy specification has not been checked to the extent necessary to determine the presence of all possible minor errors. Applicant's cooperation is requested in correcting any errors of which applicant may become aware in the specification.

Claim Rejections - 35 USC § 112

Claims **5-6, 7-13 and 18-20** are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 5

lines 3, 4-5, and 6-7, recites that the electroplating stage includes an under-*plating* stage and a top *plating* stage. However, none of these stages are electroplating stages. See also claim 6, lines 6-7.

Claim 7

lines 3, 4-5, and 6-7, recites that the electroplating stage includes an under-*plating* stage and a top *plating* stage. However, none of these stages are electroplating stages. See also claim 8, lines 6-7.

Claim 9

lines 3, 4-5, and 6-7, recites that the electroplating stage includes an under-

plating stage and a top *plating* stage. However, none of these stages are electroplating stages. See also claim 10, lines 6-7.

Claim 11

lines 2-3, it is unclear what is meant by "at least one striking stage that is substantially shorter than said top plating stage". How is it shorter? By time or length of the stage tank?

Claim 12

lines 2-3, it is unclear what is meant by "at least about ten times longer than said at least one striking stage". How is it longer? By time or length of the stage tank?

Claim 13

lines 3 and 5, recites that the electroplating stage includes two different *plating* stages. However, none of these stages are electroplating stages.

Claim 18

line 2, "Inconel and Waspaloy" are indefinite. It is suggested that their generic terminology be recited in the claim instead.

line 2, the alternative expression of the Markush group is improper. MPEP §

2173.05(h). The word "and" should be amended to the word -- or --.

Claim 19

line 2, "Inconel and Waspaloy" are indefinite. It is suggested that their generic terminology be recited in the claim instead.

line 2, the alternative expression of the Markush group is improper. MPEP § 2173.05(h). The word "and" should be amended to the word -- or --.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims **1-20** are rejected under 35 U.S.C. 103(a) as being unpatentable over **Velasquez** (US Patent No. 6,342,146 B1) in combination **Pyre** (US Patent No. 6,619,668 B1).

Velasquez teaches a high energy plating process for static seals comprising:

(a) supporting a predetermined quantity of metallic parts **12** (= steel parts) [col. 11, line 50] with the parts disposed in series **16, 16', 16"** (Fig. 3) on a conveyor **18** (= conveyor belt) having a predetermined processing path (= the arrow shows the direction

of travel of the conveyor **18**) [col. 6, lines 66-67]; and

(b) continuously moving (= continuous rack plater **10**) the parts **12** on the conveyor **18** in series through an electro-plating stage **38** (= plating bath) of the predetermined processing path to electro-deposit a metallic coating (col. 3, lines 1-3) on the parts using a high current density (= 750 amps) [col. 11, lines 57-58].

The process further comprises continuously moving the metallic parts on the conveyor in series through an initial cleaning stage **26** (= a degreaser), **30** (= an electrocleaner), **34** (= an acid bath) of the predetermined processing path prior to moving the metallic parts through the electro-plating stage **38** (col. 2, lines 54 and 65; col. 3, lines 8-11; col. 7, lines 1-35; and Fig. 1).

The process further comprises continuously moving the metallic parts on the conveyor in series through an initial rinsing stage **28, 32, 36** (= rinsed) of the predetermined processing path after moving the metallic parts through the cleaning stage and prior to moving the metallic seals through the electro-plating stage **38** (col. 2, lines 54 and 65; col. 3, lines 8-11; col. 7, lines 1-35; and Fig. 1).

The process further comprises continuously moving the metallic parts on the conveyor in series through a final rinsing stage **40** (= rinsed) of the predetermined processing path after moving the metallic parts through the electro-plating stage **38** (col. 2, lines 54 and 65; col. 3, lines 8-11; col. 7, lines 1-35; and Fig. 1).

The continuously moving of the metallic parts on the conveyor in series through the electro-plating stage of the predetermined processing path includes continuously

moving the metallic parts on the conveyor in series through an under plating stage **128** (= tin plating), **130** (= bismuth plating), **132** (= tin plating), **134** (= bismuth plating) the predetermined processing path, and continuously moving the metallic parts on the conveyor in series through a top plating stage **136** (= tin plating) of the predetermined processing path (col. 10, lines 21-23; and Fig. 11).

The continuously moving of the metallic parts on the conveyor in series through the electroplating stage of the predetermined processing path includes continuously moving the metallic parts on the conveyor in series through an intermediate rinsing stage (= rinsing can be provided *between plating tanks*) [col. 10, line 38] of the predetermined processing path after moving the metallic seals through the under plating stage and prior to moving the metallic seals through the top-plating stage.

The continuously moving of the metallic parts on the conveyor in series through the electro-plating stage of the predetermined processing path includes continuously moving the metallic parts on the conveyor in series through at least two different plating stages **128** (= tin plating), **130** (= bismuth plating), **132** (= tin plating), **134** (= bismuth plating), **136** (= tin plating) of the predetermined processing path (col. 10, lines 21-23; and Fig. 11).

The metallic seals are oriented vertically during the continuously moving of the metallic seals on the conveyor in series through the electro-plating stage of the predetermined processing path (col. 8, lines 47-54; and Fig. 6).

The metallic coating is a soft metallic coating (col. 3, lines 1-3).

The metallic coating includes at least one of tin, tin alloy, lead, gold, silver, silver alloy, nickel, copper and indium (col. 3, lines 1-3).

The method of Velasquez differs from the instant invention because Velasquez does not disclose the following:

a. Wherein the metallic parts are metallic seals supported at non-sealing surface locations, as recited in claim 1.

Velasquez teaches that the hooks **16** shown in the drawings are only one possible means for disposing the parts **12** to be plated on conveyor **18**, and are particularly useful when the parts have a hole therethrough **17**. Different sized hooks can be used for different articles and are easily removed and replaced on the conveyor. Other attachment means, e.g., slots, magnets, strips, holes, etc. may be used for disposing parts **12** to be plated on conveyor **18** (col. 6, lines 51-59).

Like Velasquez, Pyre teaches electroplating a part. Pyre teaches a method of manufacturing a metal static gasket (col. 5, lines 19-36), the metal static gasket comprising an annular body **2** made out of "Inconel 718" or stainless steel (col. 5, lines 51-56) and an electroplated layer of silver, "Teflon", nickel, gold, or a nickel and silver combination (col. 5, lines 42-50).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to have modified the method described by Velasquez with wherein the metallic parts are metallic seals because the method of Velasquez is applicable for

electroplating a wide variety of articles (col. 6, lines 51-59), and Pyre teaches that metal static gaskets are coated by electroplating (col. 5, lines 42-50). Thus, metal static gaskets or seals would have been suitably electroplated by the method disclosed by Velasquez.

As to supporting the metallic seals at non-sealing surface locations, Velasquez teaches that one having ordinary skill in the art at has the skill to modify his method by using other attachment means, e.g., slots, magnets, strips, holes, etc. for disposing parts to be plated on conveyor. Thus, one having ordinary skill in the art would have had the skill to support the metallic seals at non-sealing surface locations in order to completely electroplate the entire surface of the metallic seal.

b. Using a high chemical flow rate, as recited in claim 1.

Velasquez teaches that an advantage of his invention is that numerous articles can be plated in a short time frame, in an efficient and low cost manner (col. 5, lines 29-31). The conveyor speed was approximately 3-4 feet per minute, with 1.5 revolutions per minute of drive gear (cols. 11-12, Example 1).

Velasquez also teaches that most fluid streams are recycled or reintroduced into the process stream (col. 9, lines 58-67).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to have modified the method described by Velasquez by using a high chemical flow rate because the recycling or reintroducing of the fluid streams into

the process stream (the chemical flow rate) would have to have been fast enough to maintain contact of the conveying parts with the fresh fluid streams.

c. Wherein the under plating stage includes at least one striking stage that is substantially shorter than said top plating stage, as recited in claim 11.

Velasquez teaches that the alloy weight composition can be regulated by the length of time in the various tanks or by the amount of direct current in the various tanks (col. 10, lines 32-34).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to have modified the method described by Velasquez with wherein the under plating stage includes at least one striking stage that is substantially shorter than said top plating stage because this would have regulated the alloy weight composition as taught by Velasquez (col. 10, lines 32-34).

The reason or motivation to modify the reference may often suggest what the inventor has done, but for a different purpose or to solve a different problem. It is not necessary that the prior art suggest the combination to achieve the same advantage or result discovered by the Applicants. *In re Linter* 458 F.2d 1013, 173 USPQ 560 (CCPA 1972); *In re Dillon* 919 F.2d 688, 16 USPQ2d 1897 (Fed. Cir. 1990), *cert. denied*, 500 US 904 (1991); and MPEP § 2144.

d. Wherein said top plating stage is at least about ten times longer than said

at least one striking stage, as recited in claim 12.

Velasquez teaches that the alloy weight composition can be regulated by the length of time in the various tanks or by the amount of direct current in the various tanks (col. 10, lines 32-34).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to have modified the method described by Velasquez with wherein said top plating stage is at least about ten times longer than said at least one striking stage because this would have regulated the alloy weight composition as taught by Velasquez (col. 10, lines 32-34).

The reason or motivation to modify the reference may often suggest what the inventor has done, but for a different purpose or to solve a different problem. It is not necessary that the prior art suggest the combination to achieve the same advantage or result discovered by the Applicants. *In re Linter* 458 F.2d 1013, 173 USPQ 560 (CCPA 1972); *In re Dillon* 919 F.2d 688, 16 USPQ2d 1897 (Fed. Cir. 1990), *cert. denied*, 500 US 904 (1991); and MPEP § 2144.

e. Wherein the process is a continuous high volume process electro-depositing the metallic coating on the metallic seals at a rate of at least about 5 seals per minute, as recited in claim 15.

Velasquez teaches that an advantage of his invention is that numerous articles can be plated in a short time frame, in an efficient and low cost manner (col. 5, lines 29-

31). The conveyor speed was approximately 3-4 feet per minute, with 1.5 revolutions per minute of drive gear (cols. 11-12, Example 1).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to have modified the method described by Velasquez with wherein the process is a continuous high volume process electro-depositing the metallic coating on the metallic seals at a rate of at least about 5 seals per minute because this would have been dependent upon how many seals one having ordinary skill in the art wanted to produce. Velasquez teaches running the plater continuously for several months (3 shifts per day), producing hundreds of thousands of parts (cols. 11-12, Example 1).

Furthermore, the rate is a result-effective variable and one skilled in the art has the skill to calculate the rate that would determine the success of the desired reaction to occur, absent evidence to the contrary. MPEP § 2141.03 and § 2144.05(II)(B).

f. Wherein the metallic seals are constructed of one of Stainless Steel, Inconel and Waspaloy prior to electro-depositing the metallic coating during the electro-plating stage of the predetermined processing path, as recited in claims 18 and 19.

Like Velasquez, Pyre teaches electroplating a part. Pyre teaches a method of manufacturing a metal static gasket (col. 5, lines 19-36), the metal static gasket comprising an annular body **2** made out of "Inconel 718" or stainless steel (col. 5, lines 51-56) and an electroplated layer of silver, "Teflon", nickel, gold, or a nickel and silver combination (col. 5, lines 42-50).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to have modified the method described by Velasquez with wherein the metallic seals are constructed of one of Stainless Steel, Inconel and Waspaloy prior to electro-depositing the metallic coating during the electro-plating stage of the predetermined processing path because stainless steel and Inconel are conventional metals used for metal static gaskets as taught by Pyre (col. 5, lines 51-56).

g. Wherein the high current density used during the continuously moving of the metallic seals on the conveyor in series through the electro-plating stage of the predetermined processing path is between about 200 ASF and about 1000 ASF during at least a portion of the electro-plating stage, as recited in claim 20.

Velasquez teaches nickel-plating onto steel parts at *750 amps* (cols. 11-12, Example 1).

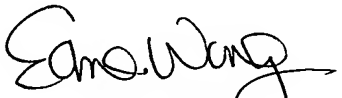
It would have been obvious to one having ordinary skill in the art at the time the invention was made to have modified the method described by Velasquez with wherein the high current density used during the continuously moving of the metallic seals on the conveyor in series through the electro-plating stage of the predetermined processing path is between about 200 ASF and about 1000 ASF during at least a portion of the electro-plating stage because the current density is a result-effective variable and one skilled in the art has the skill to calculate the current density that would determine the success of the desired reaction to occur, i.e., also depends on the conveyor speed,

absent evidence to the contrary. MPEP § 2141.03 and § 2144.05(II)(B).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Edna Wong whose telephone number is (571) 272-1349. The examiner can normally be reached on Mon-Fri 7:30 am to 4:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nam Nguyen can be reached on (571) 272-1342. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Edna Wong
Primary Examiner
Art Unit 1753

EW
October 20, 2005